

Please amend the claims as follows (this listing of claims replaces all prior listings):

1-23. (cancelled).

24. (previously presented) ~~An~~ A quartz plate etching apparatus, comprising:
a chamber;

in the chamber, a first plasma derived from a first etchant gas comprising CxF_y
molecules and a second plasma derived from a second etchant gas comprising SpF_q molecules,
x, y, p, and q being integers;

a quartz plate supported within a chamber the chamber and being etched by the first and
second plasmas;

a high frequency energy source coupled to the chamber energizing the first and second
etchant gases to generate the first and second plasmas; and

~~a first etchant gas comprising CxF_y molecules, x and y being integers;~~

~~a second etchant gas comprising SpF_q molecules, p and q being integers~~

~~an inlet structure for introducing the first and second etchant gases into the~~
~~chamber to form first and second plasma gases when energized by the high frequency energy~~
~~source, the first and second plasma gas being used to etch the quartz plate.~~

25. (original) The apparatus of claim 24, further comprising a flow controller for
controlling the amount of the first and second etchant gases entering the chamber.

26. (cancelled)

27. (currently amended) An etching system, comprising:

a chamber that includes a substrate having a peripheral portion and a central portion, the
peripheral portion being at least 50 mm from the central portion;

a first plasma in the chamber having more negative ions than electrons; and

a second plasma in the chamber having more electrons than negative ions, the amounts of the first and second plasmas having a specified ratio so that a combination of the first and second plasmas etch ~~a substrate~~ the substrate in the chamber in which the rate of etching at a peripheral portion of the substrate is within 1% of the rate of etching at a central portion of the substrate.

28. (previously presented) The etching system of claim 27 in which the first plasma is generated from C_xF_y , x and y being integers, and the second plasma is generated from at least one of sulfur fluoride, silicon fluoride, and phosphorus fluoride.

29. (previously presented) The etching system of claim 27 in which the first plasma comprises positive ions having a distribution that decreases radially from a central region of the chamber towards a peripheral region of the chamber.

30. (previously presented) The etching system of claim 27 in which the second plasma comprises positive ions, a distribution of positive ions in the second plasma increases radially from a central region of the chamber towards a peripheral region of the chamber.

31. (previously presented) The etching system of claim 30 in which the first plasma and the second plasma have a specified ratio so that a sum of the positive ions in the first plasma and the positive ions in the second plasma is substantially uniform across a substantial portion of the substrate.

32. (withdrawn) A method comprising:
providing a substrate;
providing a gas that includes a first component and a second component, at least one of the first and second components comprising C_xF_y molecules, x and y being integers;
generating a plasma based on the gas to etch the substrate, the first and second components of the gas selected so that varying the ratio of the first component to the second component varies the rate of etching at a peripheral portion of the substrate relative to a central portion of the substrate; and
controlling the rate of etching at the peripheral and central portions by selecting the amount of the first and second components in the gas so that the rate of etching near the peripheral portion is substantially equal to the rate of etching near the central portion.

33. (withdrawn) The method of claim 32 in which the first and second components are selected to generate different ratios of negative ions to electrons within the plasma.

34. (withdrawn) The method of claim 32 in which the second component comprises at least one of silicon fluoride, phosphorous fluoride, and sulfur fluoride.

35. (withdrawn) The method of claim 32 in which the volume ratio of the first component to the second component is between about 100:1 to 5:1.

36. (withdrawn) The method of claim 32 in which the volume ratio of the first component to the second component is between about 50:1 to 10:1.

37. (withdrawn) The method of claim 32 in which the volume ratio of the first component to the second component is between about 25:1 to 15:1.

38. (withdrawn) The method of claim 32 in which the substrate material comprises a semiconductor wafer.

39. (withdrawn) The method of claim 32 in which the substrate material comprises a dielectric material.

40. (withdrawn) The method of claim 32, further comprising controlling the rate of etching at the peripheral portion to be within about 1% of the rate of etching at the central portion, the peripheral portion being at least about 50 mm from the central portion.

41. (withdrawn) The method of claim 24, further comprising a second high frequency energy source to provide a high frequency energy to a support in the chamber that supports the quartz plate.

42. (New) An apparatus comprising
a chamber, and
a controller configured to control relative amounts of two different types of plasma etchants in the chamber to cause substantially uniform etching across a surface to be etched in the chamber, in which the rate of etching at a peripheral portion of the surface is within 1% of the rate of etching at a central portion of the surface.

43. (New) An apparatus comprising
a chamber, and
a control mechanism set to control a sum of positive ions in a first plasma and a second plasma to be substantially uniform across central and peripheral regions of a surface to be etched in the chamber, the first plasma being derived from a first etchant gas comprising C_xF_y molecules, the second plasma being derived from a second etchant gas comprising $SpFq$ molecules, x, y, p, and q being integers.